

Remarks

In view of the above amendments and the following remarks, reconsideration of the objection and rejections and further examination are requested.

The drawings have been objected to because page 11 is a list of reference numerals. Page 11 of the drawings is hereby canceled. Enclosed herewith is a copy of page 11 marked as "Canceled." As a result, withdrawal of the objection to the drawings is respectfully requested.

Claims 1 and 2 have been rejected under 35 U.S.C. §102(b) as being anticipated by Kawakami (JP 2002-231141). Claims 1-5 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Kawasaki (US 6,924,795) in view of Kado (US 6,666,738) and Hirano (US 2003/0030377).

Claims 1 and 4 have been amended so as to further distinguish the present invention, as recited therein, from the references relied upon in the above-mentioned rejections. Further, claims 2, 3 and 5 have been amended. Additionally, new claims 6-8 have been added.

The above-mentioned rejections are submitted to be inapplicable to the amended claims for the following reasons.

Claim 1 is patentable over Kawakami and the combination of Kawasaki, Kado and Hirano, since claim 1 recites a method of aging a plasma display panel including, when applying a voltage having an alternating voltage component at least between the scan electrode and the sustain electrode to perform an aging discharge, applying an erase discharge-suppressing voltage for suppressing an erase discharge that occurs after the aging discharge to at least one of the scan electrode and the sustain electrode, at a predetermined moment in each period when the scan electrode has a voltage level that is higher than that of the sustain electrode and when the sustain electrode has a voltage level that is higher than that of the scan electrode. Kawakami and the combination of Kawasaki, Kado and Hirano fail to disclose or suggest this feature of claim 1.

Kawakami discloses an aging method for a plasma display panel having a common electrode x, a scan electrode y, and a data electrode a. The aging method includes a field discharge 30 and an opposite discharge 40. During the field discharge 30, alternating voltage waveforms that are 180° out of phase are applied to the common electrode x and the scan electrode y and a constant voltage is applied to the data electrode a. Then, during the opposite discharge 40, alternating voltages of the same phase are applied to the common electrode x and the scan electrode y and an alternating voltage that is 180° out of phase from the alternating

voltages applied to the common electrode x and the scan electrode y is applied to the data electrode a. In this manner, aging is performed using the field discharge 30 for a first prescribed period of time and then using the opposite discharge 40 for a second prescribed period. (See Abstract; Description of Drawings; and Figure 1).

As discussed above, the field discharge 30 and the opposite discharge 40 both apply alternating voltages to the common electrode x and the scan electrode y to perform aging discharge for the associated plasma display panel. However, when the alternating voltages are being applied to the common electrode x and the scan electrode y during the field discharge 30 and the opposite discharge 40, Kawakami fails to disclose or suggest that a voltage is being applied to at least one of the common electrode x and the scan electrode y for the suppression of an erase discharge. Therefore, it is apparent that Kawakami necessarily fails to disclose or suggest when applying a voltage at least between the scan electrode and the sustain electrode to perform an aging discharge, the claimed application of an erase discharge-suppressing voltage to at least one of the scan electrode and the sustain electrode at a predetermined moment in each period when the scan electrode has a voltage level that is higher than that of the sustain electrode and when the sustain electrode has a voltage level that is higher than that of the scan electrode. As a result, claim 1 is patentable over Kawakami.

Regarding the combination, Kawasaki discloses a driving method for a plasma display panel having a sustain electrode 11, a scan electrode 12, and an address electrode 21. The driving method includes applying alternating voltages to each of the sustain electrode 11, the scan electrode 12, and the address electrode 21. The alternating voltages applied to the sustain electrode 11 and the scan electrode 12 are 180° out of phase from each other and such that there is no point when both of the alternating voltages are high. Further, the alternating voltage applied to the address electrode 21 rises with the fall of the alternating voltage applied to the scan electrode 12 and falls with the fall of the alternating voltage applied to the sustain electrode 11. (See column 10, lines 19-36 and Figures 6(A)-6(D) and 8(a)-8(c)).

In view of the above discussion, it is apparent that the driving method of Kawasaki applies alternating voltages to both the sustain electrode 11 and the scan electrode 12. However, as admitted in the rejection, the alternating voltages are applied to drive the plasma display panel and are not related to performing aging discharge for the plasma display panel. Further, it is clear from Figures 6(B), 6(C), 8(b) and 8(c), that when the alternating voltages are being applied

to the sustain electrode 11 and the scan electrode 12 during the driving of the plasma display panel, Kawasaki fails to disclose or suggest that a voltage is being applied to at least one of the sustain electrode 11 and the scan electrode 12 for the suppression of an erase discharge. Therefore, it is apparent that Kawasaki necessarily fails to disclose or suggest when applying a voltage to perform an aging discharge at least between the scan electrode and the sustain electrode, the claimed application of an erase discharge-suppressing voltage to at least one of the scan electrode and the sustain electrode at a predetermined moment in each period when the scan electrode has a voltage level that is higher than that of the sustain electrode and when the sustain electrode has a voltage level that is higher than that of the scan electrode.

Therefore, Kado and/or Hirano must disclose or suggest this feature in order for the combination to render claim 1 obvious.

As for Kado and Hirano, these references are relied upon in the rejection as supporting the position that the driving method of Kawasaki, discussed above, which is used during the normal operation of the plasma display panel can also be used during an aging of the plasma display panel. However, it is apparent that neither of these references cures the deficiency of Kawasaki as set forth above. As a result, the combination of Kawasaki, Kado and Hirano fails to render claim 1 obvious.

As for claim 4, it is patentable over the references relied upon in the rejections for reasons similar to those set forth above in support of claim 1. That is, claim 4 recites a method of aging a plasma display panel containing a scan electrode, a sustain electrode, and a data electrode, the method including when applying a voltage having an alternating voltage component at least between the scan electrode and the sustain electrode to perform an aging discharge, applying an erase discharge-suppressing voltage for suppressing an erase discharge that occurs after the aging discharge to the data electrode, at a predetermined moment in a period when the scan electrode has a voltage level that is higher than that of the sustain electrode. None of the references, either alone or in combination, discloses or suggests applying an erase discharge-suppressing voltage as recited in claim 4.

Because of the above-mentioned distinctions, it is believed clear that claims 1-8 are allowable over the references relied upon in the rejections. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to make any combination of the references of record in such a manner

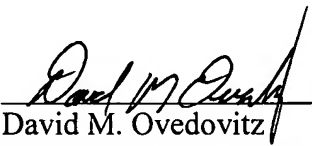
as to result in, or otherwise render obvious, the present invention as recited in claims 1-8. Therefore, it is submitted that claims 1-8 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

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Reference numerals in the drawings

- 1, 100: plasma display panel (panel)
2: front substrate
3: back substrate
4: front glass plate
5, 5₁ – 5_n: scan electrode
6, 6₁ – 6_n: sustain electrode
7: dielectric layer
8: protecting layer
9: back glass plate
10, 10₁ – 10_m: data electrode
11: dielectric layer
12: barrier rib
13: phosphor layer
15, 15₁ – 15_n: scan electrode terminal section
16, 16₁ – 16_n: sustain electrode terminal section
17, 17₁ – 17_n: data electrode terminal section
18: discharge cell
20: discharge gap
21: adjacent gap
100: plasma display panel
110: aging device
115, 116, 117: short-circuit bar
120: power supply section
130: voltage waveform generator
140: voltage waveform setting unit